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## Vit Plant construction milestone reached

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**Richland, WA** -- Bechtel National Inc. has reached a significant construction milestone on the \$12.2 billion Waste Treatment Plant at Hanford this week when the first of 1,700 tons of structural steel was erected for the plant's Analytical Laboratory.

Of the four Waste Treatment Plant facilities that will handle radioactive waste, which include the High-Level Waste Vitrification Facility, the Low-Activity Waste Vitrification Facility and the Pretreatment Facility, the Analytical Laboratory is the smallest, but it still has a footprint the size of a football field and will stand four stories high.

The Analytical Laboratory is the last of these facilities to begin construction. The five-foot thick steel-laced concrete foundation was finished in September.

The Waste Treatment Plant is being built to immobilize much of 53 million gallons of radioactive waste stored in 177 aging underground tanks at Hanford that is left over from the Cold War production of plutonium for nuclear weapons. The plant will turn the radioactive waste into a stable glass waste form using a process called vitrification.

In vitrification, the waste is mixed with silica and other glass-forming materials and heated to 2,100 degrees F. in an electric melter. The waste becomes part of the glass, which immobilizes the waste and isolates it from the environment for the thousands of years it takes for the radioactivity to decay to safe levels.

The Analytical Laboratory will handle about 12,000 waste samples each year. At the front end of the vitrification process, the laboratory will determine the chemical composition of the radioactive waste coming into the plant from Hanford's underground storage tanks. This information is used to develop the correct recipe for each batch of waste. At the back end of the plant, the laboratory will analyze samples of the glassified waste to make sure it meets strict regulatory standards.

Construction began on the Analytical Laboratory about two years ago and is about 30 percent complete.

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